

“BROWN MARSH” DEMONSTRATION PROJECTS TO TEST EFFECTIVENESS OF REMEDIATION STRATEGIES

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The term “brown marsh” has been coined to describe the very severe marsh dieback that occurred during the recent protracted drought throughout large expanses of Louisiana’s coastal marshes, particularly in salt marshes comprised of *Spartina alterniflora*. Initial investigations have indicated that approximately 20,000 acres of marsh grass have converted from dense vegetation to open mud flats with little or no vegetation to hold the soil together. The erosion potential of these areas is extremely high. Further, there are approximately 260,000 acres of marsh grass that are either moderately or severely impacted.

The Louisiana Department of Natural Resources (LDNR) is the state’s lead agency for the implementation of coastal restoration projects to offset Louisiana’s dramatic wetland loss. Since Act 41 of the Second Extraordinary Session of the 1981 Legislature, the LDNR has gained considerable experience in planning, constructing, operating, maintaining, and monitoring a wide variety of coastal restoration projects. Therefore, in coordination with brown marsh research efforts by other agencies, LDNR is assessing costs and the biological results of trial projects as possible brown marsh remediation alternatives, and is developing the project implementation portion of a remediation plan.

The LDNR will investigate three main techniques that may address sites affected by brown marsh: dedicated dredging in order to return soil elevations to levels high enough for marsh re-establishment, stabilization of critical shorelines that are at risk due to loss of marsh vegetation, and vegetation planting

trials in conjunction with the U.S. Department of Agriculture's Natural Resources Conservation Service and the Louisiana Soil and Water Conservation Districts.

The LDNR is planning to quantify the aerial extent of dedicated dredging, shoreline stabilization, and plantings that would be needed to address the problem. It is envisioned that after the trials are completed, potential project areas will be ranked by their priority of need, and the site-specific potential costs of appropriate remediation project type will be assessed. In this manner, policy makers can compare costs and the effectiveness of various combinations of remediation approaches across most of the area affected by the marsh dieback.